

WHAT IS CLAIMED IS:

1. A method for correcting an offset of an output signal produced from a resolver that detects a rotation of a rotary device, the method comprising steps of:

picking a maximal value and a minimal value from the output signal for a certain time period;

calculating an average value between the maximal value and the minimal value; and

correcting the offset of the output signal based on the average value.

2. A method for correcting a gain of an output signal produced from a resolver that detects a rotation of a rotary device, the method comprising steps of:

picking, for a certain time period, a maximal sine value and a minimal sine value from a sine output signal included in the output signal, and a maximal cosine value and a minimal cosine value from a cosine output signal included in the output signal;

calculating a first differential value between the maximal sine value and the minimal sine value, and a second differential value between the maximal cosine value and the minimal cosine value; and

correcting a gain differential between the sine output signal and the cosine output signal based on the first and second differential values.

3. The method according to claim 1, further comprising a step of determining a candidate offset of the output signal based on the average value before the correcting step, wherein the correcting step is inhibited when the candidate offset is out of a certain range.

4. The method according to claim 1, further comprising steps of:

determining whether the output signal of the resolver is abnormal; and

inhibiting the correcting step when the output signal of the resolver is determined to be abnormal.

5. The method according to claim 1, further comprising steps of:

detecting whether a rotational speed of the rotary device is not greater than a certain speed and a rotational direction of the rotary device is not reversed; and

inhibiting the correcting step when the rotational speed is determined to be greater than the certain speed or the rotational direction is determined to be reversed.

6. The method according to claim 1, wherein the correcting step is performed periodically or at a start of the method.

7. An apparatus for correcting an offset of an output

signal produced from a resolver that detects a rotation of a rotary device, comprising:

means for picking a maximal value and a minimal value from the output signal for a certain time period;

means for calculating an average value between the maximal value and the minimal value; and

means for correcting the offset of the output signal based on the average value.

8. An apparatus for correcting a gain of an output signal produced from a resolver that detects a rotation of a rotary device, comprising:

means for picking, for a certain time period, a maximal sine value and a minimal sine value from a sine output signal included in the output signal, and a maximal cosine value and a minimal cosine value from a cosine output signal included in the output signal;

means for calculating a first differential value between the maximal sine value and the minimal sine value, and a second differential value between the maximal cosine value and the minimal cosine value; and

means for correcting a gain differential between the sine output signal and the cosine output signal based on the first and second differential values.

9. The method according to claim 2, further comprising a step of determining a candidate gain differential

between the sine output signal and the cosine output signal based on the first and second differential values before the correcting step, wherein the correcting step is performed periodically or at a start of the method, and is inhibited when the candidate gain differential is out of a certain range.

10. The method according to claim 2, further comprising steps of:

determining whether the output signal of the resolver is abnormal; and

inhibiting the correcting step when the output signal of the resolver is determined to be abnormal.

11. The method according to claim 2, further comprising steps of:

detecting whether a rotational speed of the rotary device is not greater than a certain speed and a rotational direction of the rotary device is not reversed; and

inhibiting the correcting step when the rotational speed is determined to be greater than the certain speed or the rotational direction is determined to be reversed.

12. The method according to claim 2, wherein the correcting step is performed periodically or at a start of the method.